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## **Access to information in an electronic age: centrally planned economy versus free enterprise (Discussion)**

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## ACCESS TO INFORMATION IN AN ELECTRONIC AGE: CENTRALLY PLANNED ECONOMY VERSUS FREE ENTERPRISE

### Participants:

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Jozsef Zsidai, Technical University for Heavy Industry, Miskolc, Hungary.

Chairman: Maurice Line, British Library Lending Division.

1. What advantages do you see in centralized planning of the use of electronic technology for information provision and access, and what disadvantages?

### Anna Dömötör

Central planning should mean efficiency and free enterprise flexibility - in the organization of information systems, as well as in the economy.

In Hungary central planning has played an important role in the establishment of on-line connections with international information centres. Only one foreign trade company has the right to make the necessary international contracts, and has the hard currency to pay for the use of international information centres. Other users, such as university libraries etc, get the password from this company and pay for the services in Hungarian currency, thus avoiding having to sign separate contracts. This also simplifies things for the contracting foreign parties.

The necessary technical facilities for obtaining access to foreign information databases have been provided by the government, the data transmission system being built by the Hungarian Post. (This is better than the telephone connection). Terminals, printers etc may be freely selected on the market by the institutions themselves. They will carry out their own searches and acquire the original documents from information centres for themselves.



Nada Čučnik-Majcen

Centralized planning means that sufficient funds must be available at the very beginning in order to develop a system with the necessary software and professional support, thus avoiding the incompatibility that is likely to result from the gradual development of numerous specialized information centres using a variety of heterogeneous hardware and software.

Dieter Schmidmaier

The advantages of a centralized planning system appear to outweigh any possible drawbacks. In the DDR the library services are centrally planned and directed by the Ministry of Culture, and the scientific-technological services, by the Ministry of Science and Technology. Thus library and information activities in all fields are coordinated. Standardization is simplified by the uniform and simultaneous introduction of new methods at the start. Division of labour and the professional collaboration in the DDR and other communist countries are also facilitated.

Jozsef Zsídai

In any country, it seems that centralized planning of information provision would be advantageous, as it is more efficient and economical, and is likely to provide better coverage of material for all users.

Access, however, should be entirely decentralized through regional sub-centres such as university libraries. I am also in favour of decentralization for the provision of technical literature which is heavily used. But materials less frequently used should be stored centrally, as with the British Library Lending Division.

Comments during discussion

In a centrally planned economy, coordination of information planning with social and economic planning is far simpler. Also, it is easier to standardize hardware and software. In capitalist economies there are standards developed by such bodies as the International Standards Organization, though they are accepted rather than imposed. There is no direct central control in most capitalist countries over libraries in the public sector, and none over private (eg industrial) libraries. The market stimulus, and also the stimulus of competition between libraries, are strong and important.

2. Do you see advantages in electronic data storage and transmission for the better use and deployment of information resources in the future?

Nada Čučnik-Majcen

Yes.



Dieter Schmidmaier

I believe that we have reached the stage when it is no longer possible to utilize and develop all the sources of information without electronic data processing. The computer ensures fast access to information and eliminates duplication of effort.

Jozsef Zsídai

Electronic data storage has the advantage of a much faster service and greater reliability. However I believe that users will still prefer to receive the source materials on paper; so the popularity of electronic information will depend on a fast supply of the original documents.

Comments during discussion

As electronic technology develops its function in information provision is bound to increase. It is important to ensure that access to documents, whether by electronic or conventional means, keeps pace with access to bibliographic and other files.

3. Do you have problems of access to information databases in Western Europe, North America and South East Asia? What are the future plans for developing such access?

Anna Dömötör

The library has access to Dialog, Data-Star, CAS-ONLINE and ORBIT. Connections can be made directly from the library; 104 on-line searches were made last year.

As for access to document delivery centres, the library mainly uses the services of the British Library Lending Division, the Technische Informationsbibliothek in Hannover, and the Chemical Abstracts Document Delivery Service; 311 documents were acquired last year from abroad. A few selected institutions, such as the Hungarian National Library, pay for the services of document delivery centres, although lending is carried out directly.

Nada Čučnik-Majcen

There do not appear to be any problems with accessing information databases in Western Europe or North America. Databases in Eastern Europe are accessed in the traditional way. No need for contact with South East Asia has arisen yet. However, the cost of information, along with the poorer exchange rate and the lack of a telecommunication network, are causing problems.

Dieter Schmidmaier

In the DDR we have access to information databases such as INSPEC, CHEM ABS, MEDLARS, etc. Supply of the source



material covered by these is provided by a Library Speciality Network which has been established over the past 15 years. With regard to the selective dissemination of information in the field of physics, based on INSPEC, it was shown in 1982 that 29 out of 40 of all information sources were available in this network.

The DDR and the other Socialist states cooperate with international databases such as INIS, INFOterra and AGRIS.

The Socialist countries have established in recent years an efficient system known as 'International System for Scientific-Technological Information', which does not seem to be well known in capitalist countries. It comprises many subsidiary groups within the scientific disciplines (such as Coal Mining, Building Trade, Forestry, etc). Furthermore we have five source-orientated systems for scientific research papers, trade publications, patents, translations and scientific and technical films.

In 1976 VINITI (the All Union Institute for Scientific and Technical Information of the Soviet Union) established an automated information system (ASSISTENT) for science and technology based on Referativnyi Zhurnal, which is used with great success in the DDR.

We intend to concentrate on the development of our own systems, and also collaborate closely with international organizations such as INIS, AGRIS and INFOterra.

#### Jozsef Zsidai

The Library has access to Dialog and ORBIT, as well as to the Swiss Data-Star. Talks are in progress with other databases. No contact with South East Asia is planned; but utilization of the Comecon databases is likely.

#### Comments during discussion

Very few in western countries know what East European databases exist, apart from Referativnyi Zhurnal. The Cyrillic alphabet may be a deterrent to use. They may well contain many useful references that are otherwise inaccessible. More information on their nature, number and accessibility would be valuable.

4. What plans or proposals are there in your country (or Eastern Europe) for an electronic information network (up to say the year 2000 AD)?

#### Anna Dömötör

First trials have been carried out successfully for establishing an on-line connection with the Comecon information system. This is important since Soviet technical literature is widely used.



Nada Čučnik-Majcen

A national information network is beginning to be implemented in order to solve the problems stated in answer to Question 3. Special attention must be paid to the following:-

- a) distributed processing of scientific and technical information
- b) relevant division between the means of information transmission (discs, microforms)
- c) common methodology and standardization for gathering, storage and dissemination of information
- d) strictly defined elements in the process of training, problem solving, and data security.

The necessary conditions must be established for keeping regular track of developments in information technology.

Dieter Schmidmaier

Existing information resources are to be developed or enlarged into databanks for interdisciplinary specialisms. These will then be linked into an automated information network, and eventually every research establishment in the DDR will have rapid access to these databanks.

Collaboration with other Socialist countries will be strengthened by establishing common databanks with uniform operation.

At present there is an unacceptably long delay in providing a comprehensive supply of information to the scientist; we shall aim to improve this.

We shall also aim to produce automated union catalogues for individual information sources (both general and special) and for selected databanks; to incorporate automated remote enquiry and requisitioning services; and finally to prepare and provide examples for transmission of complete texts and illustrations via VDU, and storage of complete texts on videodiscs.

Jozsef Zsídai

Plans probably exist, although I do not know of any. I presume Comecon will establish its own independent electronic information network by the end of the century. In my view the information industry is heading towards universality.

5. What plans or proposals are there in your country (or Eastern Europe) for the export of information to Western Europe, North America and elsewhere?

Nada Čučnik-Majcen

Cooperation has taken place for some time, and will continue. Particularly in the areas of oncology (Cancernet), patents



(Inpadoc), biotechnical sciences (AGRIS), information management (ARTEMIS) and electronics (INIS). Such cooperation (contributing to foreign databases information about our sources) has been planned and organized by specialized information centres.

We are about to introduce cooperation in the field of building industry, through a specialized information centre for civil engineering at this library and the specialized information centre for civil engineering in Stuttgart, West Germany (IRBW). The library also plans to cooperate with SIGLE (System for Information on Grey Literature in Europe).

Dieter Schmidmaier

If by 'export of information' is meant a) the export of 'know-how', and b) courses offered by universities for transmission of new information, then this is certainly taking place in all Socialist countries.

Jozsef Zsidai

No such plans are known to me. However, Hungarian information agencies are working for international organizations, such as Unesco, and for developing countries. I believe that the results of Hungarian science ought to be made available to the databases in Western Europe and North America.

6. Is cooperation between universities and industry expected to have an effect on your information resources in the future? If so, in what way?

Anna Dömötör

Relationships between the university and industry have been discussed in my other paper prepared for this conference.

The industrial use of the library and the charges made for it have made it possible to maintain on-line connections with databases and to increase the number of information sources. We believe that it will be necessary eventually for every institution to have access to information databases.

Nada Čučnik-Majcen

The system of scientific and technical information is decentralized in Yugoslavia. It is based on cooperation between universities and specialized information centres, which develop in organizations with the greatest number of users in a certain field. These are usually independent university libraries, department libraries, or, less often, special libraries or information services in other organizations.



Contact with and feedback from the users of these specialized information centres are facilitated, since they are staffed by professionals in the particular fields. Cooperation between members of the specialized information centres also makes possible the development of specialized databases and information access through SDI and retrospective searching, processed in national computer centres.

New specialized centres will be required in other fields (eg social sciences, education).

Dieter Schmidmaier

The government of the DDR has stressed for many years the close link between universities, academies of science and industry. There are many instances of cooperation between libraries of academic and research institutions and industrial concerns. In 1983, for instance, a specialist library network 'Mining and Technical Metallurgy' was founded in the DDR. 25 libraries of various types belong to this.

Its aims are:-

- a) Acquisition of grey literature
- b) Construction of a specialist union catalogue
- c) An internal lending scheme
- d) Systematic further training of staff
- e) Application of electronic data processing (as referred to in answer to Question 4)
- f) Establishment of a databank.

Jozsef Zsídai

Yes. I believe that industry will be compelled to an increasing degree to make recourse to information services, and that it will be ready to pay for them. It is to be hoped that it will also assist in promoting the development of information organizations.

7. Are there market forces in your information industry? If so, how are these likely to affect the supply and demand for information in the next 15 years?

Nada Čučnik-Majcen

Yes. Yugoslavia has still to catch up with many of the latest developments in information technology. But it is expected that, as a result of the introduction of this technology, more information will be disseminated and available for use. It will increase the capacity for transmitting information to many more users. It will therefore be necessary to have more coordination between industry, research, education and all types of library and information services.



Dieter Schmidmaier

There must be market forces, but at present they are not apparent in information provision.

Jozsef Zsidai

We have a home market for our information industry, but this is not yet sufficiently stable.

Comments during discussion

The lack of an enterprise market could affect information supply by reducing the stimulus to improve it. The lifelines of the information world are increasingly in the USA as electronic technology develops and the private sector becomes more involved in information provision. This involvement has in turn helped to stimulate the public sector; this is seen as being partly in competition with the private sector, and there is a debate as the relationship between them (cooperation, competition, or division of labour). What is the best interface between the Post-Industrial Society and the Information Society?

General comments during discussion

The difference between centrally planned and capitalist economies so far as they affect information provision and access may be less real than sometimes supposed. In any case, many capitalist economies have a strong element of central planning of information policy and practice, while several centrally planned economies allow a fair measure of freedom. It is important that the two kinds of economy should have free interaction among themselves and with each other.